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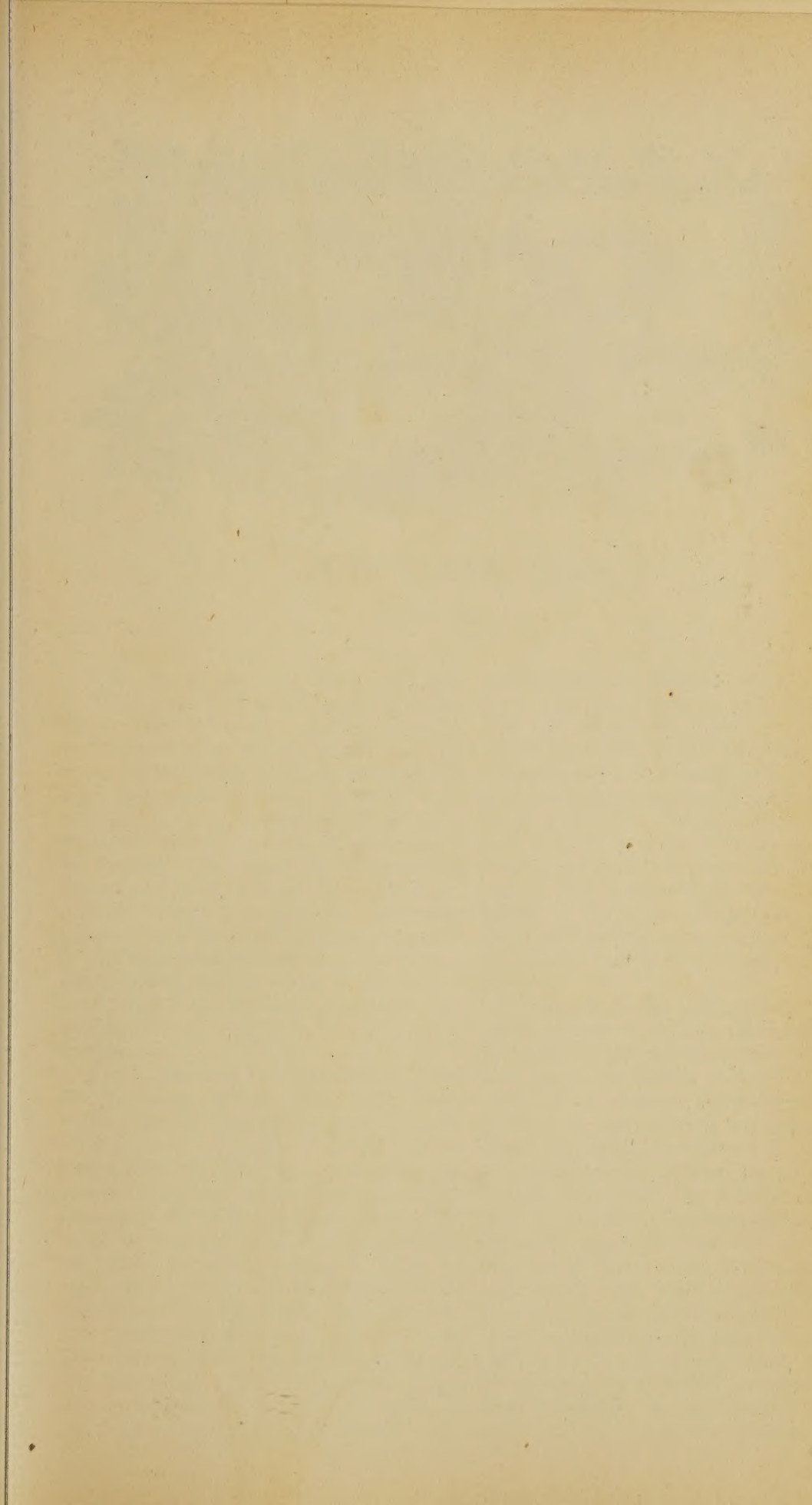


J. Walton

LILIUM EXCELSUM.

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NOV BER, 1888.

HOW TO PLANT the lawn and the grounds surrounding the house is, as the seasons pass, an ever recurring question in the thousands of new homes that are everywhere springing up in city and village and country place, on the broad plains, the slightly hillsides, and the quiet valleys of our wide extended and beautiful country. To answer the question sufficiently in detail to be wholly satisfactory, and yet briefly, is impossible. But some general principles which should guide in this operation may be stated even in a small space, though it is to be understood that these, in their application, are susceptible of almost indefinite modifications.

First: *The lawn area should be as great as the limits of the place will allow.*

On suburban and village grounds there is comparatively little liability of infringement of this rule, as usually the lots are none too large, especially at the front and the sides of the residences, to admit of the employment of any portion for other purposes; though it must be said that frequently, where the front and sides of the lot have been laid out with care, sufficient attention has not been given to the rear immediately surrounding the house. This is a grave error. The grounds about the house should, in every part, rear as well as front, be well

planted for ornamental effect, and all parts kept with the same skill and taste. The well kept lawn and the beautiful trees and shrubs are for the pleasure and enjoyment of the inmates of the house, and every window should look upon a scene of beauty. To tastefully plant and keep only those parts of the grounds that are in sight from the street is a vulgarity that a true horticulturist could not be guilty of. It is like being slatternly in dress and habits at home, and dressing up in fanciful finery to appear in the streets.

Disregard of the rule stated is more often noticed in country places of some pretensions, where a fine house has only that part immediately in front of it devoted to ornamental planting, being cut off from the surrounding grounds sometimes by a fence, sometimes by a hedge, or sometimes by neither, the grass line terminating where the plowed land by the side of it commences, the two surfaces in rude contrast. Thus, where land is of least value, and where the opportunity for good gardening may the most easily be made available, we most frequently see the lack of ability to employ the advantages that present themselves. It is not to be inferred that these remarks, so far, relate to farm grounds but to country residences, the



owners of which have the means to give the grounds the attention that good horticultural taste demands. But they should not be restricted from applying to the grounds of our most prosperous farmers, for, although the nicety of gardening that is required by a suburban place is neither expected nor desirable on farm grounds, yet a considerable extent of ornamental planting about the farm house will add greatly to its beauty and the pleasure and comfort of its dwellers.

The house grounds of very many farms could be greatly improved by increasing their extent and planting them judiciously and at no great expense. How great an area should be covered by ornamental planting will depend in each individual case upon the circumstances, and in a general way this can be indicated no better than to say that the house grounds should be ample. There should be room for a good collection of trees and shrubs, room for a good stroll, room for games, such as ball, tennis and croquet, for swings and all the appliances and playthings that add to the pleasures of children.

There are possibilities about some farm houses which, developed, would make them noted for their beauty, and add greatly to their salable value, and the requisite changes and improvements need not be expensive. Since amplitude of space is a desirable quality of ornamental grounds, the following principle is plainly deducible :

Second: *From the main points of view across the grounds the line of vision should be uninterrupted throughout their whole length.*

The exit from the house, the windows of the rooms most occupied, the entrance to the grounds, and the first approach to the grounds from either side may be stated in a general way as the main points of view. To obstruct the views from these points would dwarf the grounds in appearance, or make them seem smaller than they really are.

Third: *A large area of unbroken lawn is favorable to the impression of amplitude of surface.*

By this statement it is not meant that the lawn space should be wholly destitute of tree or shrub ; a few objects, properly placed, may even seemingly en-

hance the width of space, but these objects must not be so large, or be so placed, as to violate the second rule.

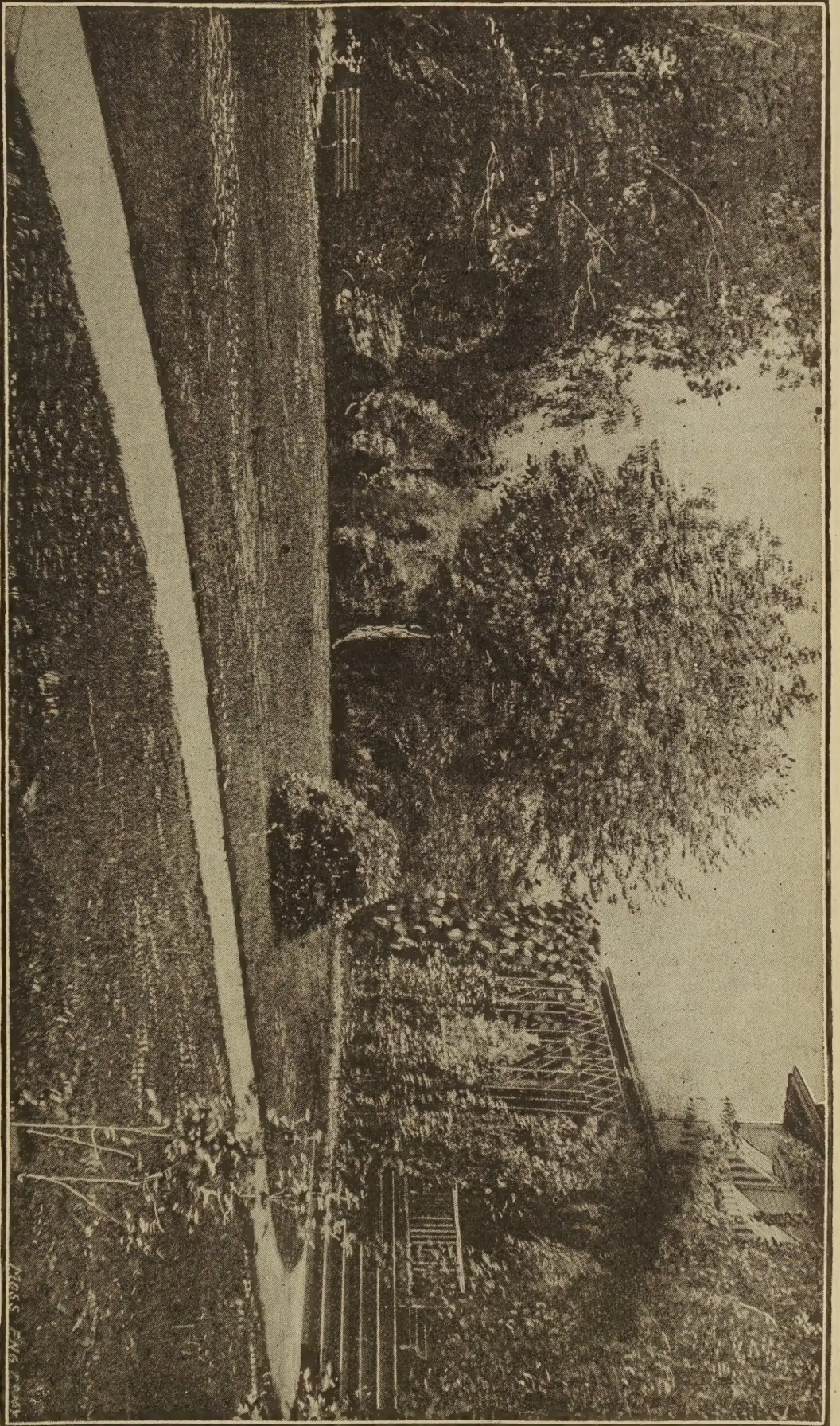
It follows from the principles now stated that the general planting must be done on the margins of the grounds, and in order that the second rule, or principle, may operate, the trees and shrubs will be collected in groups, or, in other words, their masses will be broken by open spaces. The masses of foliage should appear in irregular outline, and those trees which are particularly fine in form, or have marked characteristics of foliage, should stand out prominently from the others. The larger specimens, as a rule, should be placed behind the others ; but all should have room to develop fully, except when the planting is purposely made so close that an effect is desired only from the mass of foliage and not from the individual trees.

Fourth: *Disagreeable or undesirable views may be obstructed by the planting of single, low-growing trees, or trees and shrubs in close masses.*

The landscape gardener has frequent opportunity for the application of this rule, adding greatly thereby to the pleasing appearance of the grounds. In the same manner, also, may be conserved that privacy which is so essential to the enjoyment of the garden by many persons, by excluding the view from the street. When this is desired a closely planted border of trees and low and high-growing shrubs will secure the end.

In order to illustrate more fully the principles that have now been stated, the following series of engravings have been prepared from photographs taken in the grounds, in this city, of GEORGE ELLWANGER, the well known nurseryman and enthusiastic horticulturist. This place, though not large, shows what pleasing effects can be produced by proper planting. A few large trees are at the sides of the grounds. A border of low shrubs and herbaceous plants form a margin on the street line. On the south side, forming a foreground to a few tall trees, is an irregular margin planted to hardy shrubs, native Ferns and some Palms, Bananas, Agaves, and other sub-tropical plants turned out for the summer, also bulbous and herbaceous plants. These engravings form an excellent study in ornamental tree planting.





GROUNDS OF GEORGE ELLWANGER, ROCHESTER, N. Y.



## NOXIOUS INSECTS.

Noxious insects are more numerous and destructive now than they were fifty years ago. Where nature has a chance to work out her laws, all animals, from the highest to the lowest, do not increase beyond proper limits. Even man himself is no exception to this great law; but let a break occur in this great natural chain and it is felt all along the line. Some species will increase enormously, while others almost entirely disappear.

Now, as insects are far more numerous than all the higher animals, it follows that if some unforeseen event takes place that favors a great increase of some noxious species, man is sure to be a great sufferer. And this state of things is exactly what is taking place to-day. The reader will naturally inquire why the beneficial ones do not increase as fast as the destructive ones. The answer is, the food plant of the latter has increased enormously, and all the surroundings have favored its rapid increase, while the other, living upon animal (imago) food, is entirely outstripped by the vegetable eating species.

The beneficial insects mostly belong to the orders Hymenoptera and Diptera, but there are useful ones among all of the orders.

Besides insects, birds, quadrupeds and reptiles all take part in checking the increase of these pernicious pests. But man is not infallible, and does many things intentionally for the best, but which, in reality, prove a great loss to him. Commercial intercourse has brought many pernicious insects to our shores, some of which have found their way to all parts of the country. Some of these foreign intruders are the worst enemies the farmers and fruit-growers have to contend with. The codlin moth, *Carpocapsa pomonella*, may be ranked as foremost in the list of foreign depredators. Indeed, the annual loss by this insidious species alone is almost beyond calculation. As the larva and imago live a secluded life, it is far more difficult to control than many other depredating insects.

Fifty years ago every farm in the Eastern, Middle and Southern States had from five to twenty acres of woodland. These lands not only served many other good purposes, but were natural resting

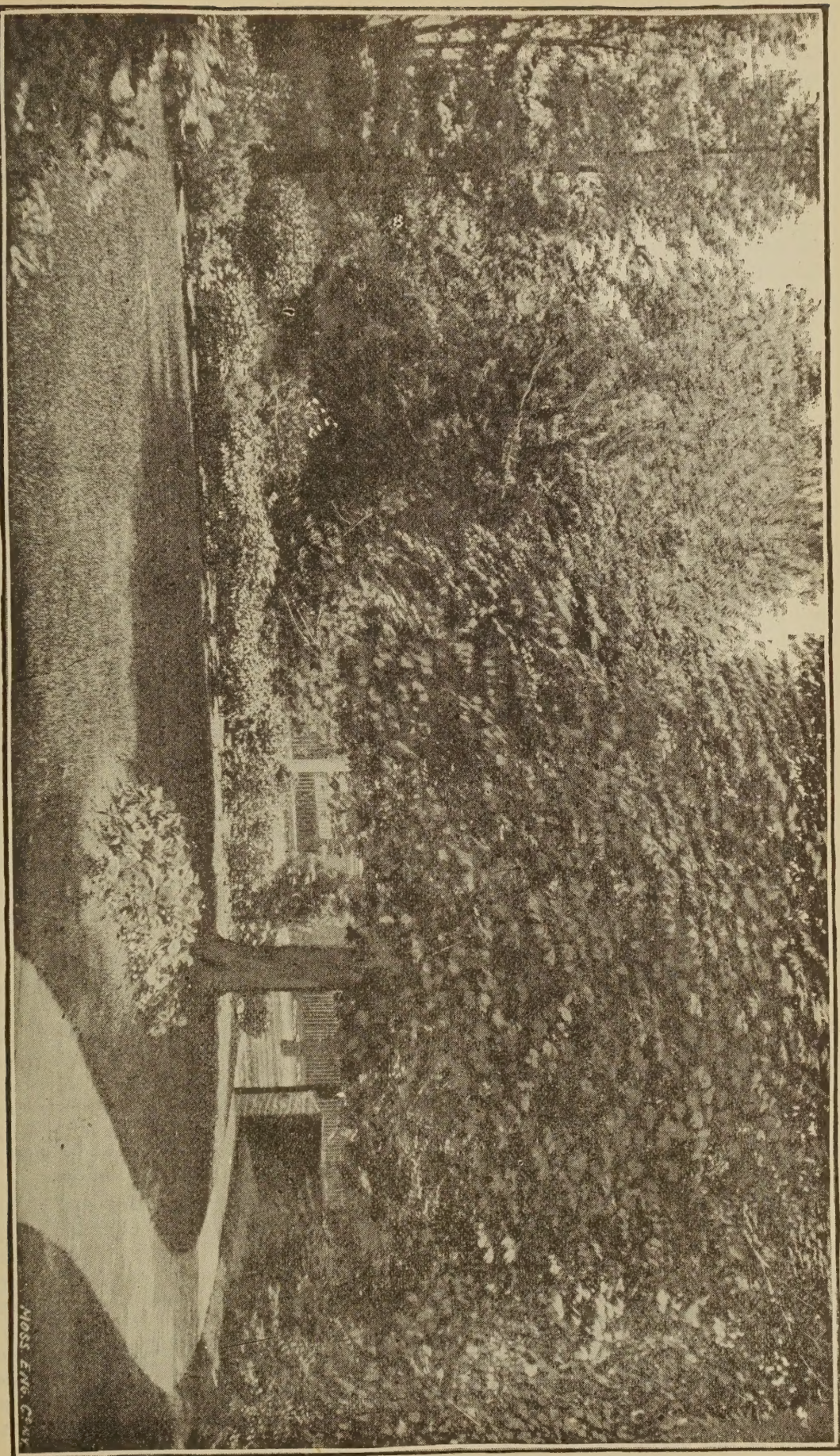
places for birds, and served them as safe shelter during the heat of the day. These primitive forests were the home of many species of birds. The writer well remembers the delight experienced in going to the woods in the spring of the year, and listening to the songs of the native warblers as they returned from their winter quarters at the south. The shrill whistle of the quail was as familiar to the ears of the farmer as household words. The scream of the blue jay rang through the forest clear and loud. The many species of woodpecker were watched with intense interest as they glided up and down the trunks of the trees, ever and anon rapping with irresistible force with their powerful beaks, and frequently drawing forth some huge grub that had been sapping the life of some monarch of the forest. While watching these ever industrious and useful birds, a scarlet tanager, like a flash of fire, or some other bright bird, would flit by, happy and beautiful.

How is it now? The woodman's axe and the pot-hunter's gun can tell the sad story. The birds have gone—no home, no resting place, no safety anywhere. Looking at this sad picture, one feels ready to exclaim with the poet BURNS.

Inhuman man! curse on thy barbarous art,  
And blasted be thy murder-aiming eye;  
May never pity sooth thee with a sigh,  
Nor ever pleasure glad thy cruel heart.

The birds that were so common fifty years ago were mostly insect-eating birds, and destroyed millions of noxious insects, and were of inestimable value to the farmer and tiller of the soil. Even the grain-eating birds consumed a large number of larvæ. The humming birds, supposed by many to subsist wholly upon honey, consume many small beetles and thrips, and thereby confer a benefit to the florist. AUDUBON AND WILSON dissected many humming birds, and in every instance found insects in the crop and stomach. The much despised skunk is a good entomologist, and the farmer and gardener make a great mistake in persecuting and destroying this humble little animal. The few eggs he purloins from the farmer's hen-yard very poorly compensate for the great number of noxious insects he destroys. In May, he is sometimes seen, about sundown, on some ele-





GROUNDS OF GEORGE ELLWANGER—LOOKING TOWARD THE STREET.



vated spot, watching for the May beetle as he wheels his droning flight, and he saves him, too, not in the sense spoken of in the immortal elegy, but between his teeth. He will sit an hour at a time gathering in the destructive beetles. He is a persistent hunter, and in his nocturnal rambles moves along with his nose close to the ground; his sense of smell is so acute not an insect, not a larva, above ground or below, can escape him, his eyes now glow with unusual brilliancy as he scans every leaf and branch for the hidden prey. About Tobacco plantations his services in destroying the tobacco worms are considered valuable.

Several years ago Tobacco was cultivated to some extent in the adjoining town of Brighton. The writer, wishing to get a few of the worms to rear moths from, called on a gentleman owning a plantation in the town, and made known his object. The reply was, "Take all you can find; we want to get rid of them." In going through the rows I noticed many holes in the ground, five or six inches deep, but could not make out the object, as they did not seem to have anything to do with the Tobacco. I mentioned the fact to the gentleman, who smiled as he told me that it was done by skunks to obtain the tobacco worms that had left the plant and buried themselves to undergo their transformations, but were forestalled by the keen scented animal and made to serve as food. The gentleman then voluntarily gave me an account of the transformations of the worms after leaving the Tobacco. I nodded assent, and was greatly amused at the curious and unique language employed by him in giving the description. He seemed to think, in order to give character to his account, it was necessary to martial all the big words and names at his command, whether they were appropriate or not.

The toad is a modest little reptile, and as his bill of fare is composed entirely of insects, he is very useful about vegetable gardens. In Europe the services of the toad are appreciated, and the gardener will not allow them to be molested.

Much as birds, quadrupeds and reptiles do in thinning the ranks of noxious insects, their services do not compare with those of beneficial insects. As stated in the beginning, they belong to

all of the orders, but more especially to the orders Hymenoptera and Diptera.

In the order Hymenoptera there is a large number of wasp-like insects, called Ichneumon flies, the young of nearly all of which are parasitic. The eggs are laid promiscuously upon the body of the caterpillar, and when they hatch the young worms make their way into the body of their victim, and there they remain, feeding upon the internal parts until they get their growth, and then come to the surface and spin their rice-like cocoons, and in a short time come out winged flies. Sometimes the entire surface of the body of the worm will be covered with these rice-like cocoons, and as they stand up end-ways, give the larva a singular and grotesque appearance. As these minute parasites do not attack the vital parts of their victim, it continues to feed while it is being eaten up piece-meal, and finally dies, but not before the parasites get their growth, come to the surface and spin, as before stated.

There are some large Ichneumon flies whose habits, in some respects, differ from the foregoing. They lay but one egg on each larva, and when the parasite gets its growth it does not come to the surface, but spins a cocoon inside its victim.

There is a large number of Diptera, or two-winged flies, whose young make a living to the detriment of some unfortunate caterpillar. They change to pupæ inside their host.

There are several species of beetles that help to thin the ranks of noxious species. Foremost among them are the caterpillar hunters. The largest (*Calasomia scrutator*) is a fine, large species of a dark green color, with fluted wing covers (elytron). Its great strength enables it to master the largest larva. It will seize its victim with its powerful jaws, and lift it up and shake it as a terrier would a rat. This is repeated several times before the worm succumbs. The other (*C. calidum*) is smaller, with black wing covers ornamented with metallic spots. Unfortunately for the gardener these beetles are not common.

The Tiger beetles, belonging to another genus, subsist upon insects. They are much smaller than the preceding but are far more numerous and equally sanguinary.





GROUNDS OF GEORGE ELLWANGER—SIDE BORDER OF LAWN.

MOSS ENG. CO. N.Y.



To none of the beneficial insects is the gardener and florist more indebted than to a family of beetles called lady-birds. These beetles are small, but they make up in numbers and usefulness what they lack in size. They subsist principally upon plant lice. One of the most common species is the northern lady-bird, *Coccinella borealis*. Half of a Pea would represent the size and shape of this species. It is orange-red, with several spots,

Another common species is *C. 10-maculata*. This species is elliptical in shape, dark purplish-red, ornamented with ten black spots; it is gregarious, and is sometimes seen in great numbers in the spring of the year, especially about the roots of trees.

There are many other species, all of which are very useful in destroying that bane of the florist, the invincible plant louse.

The dragon flies have been aptly called the Tamerlanes of the insect tribe. The singular cognomen of devil's darning-needle was given them in a superstitious age, when their habits were not as well known as at present. These flies, although a terror to the insect tribe, are the friend of man, and may be classed as beneficial.

In referring to the products of the farm and garden, which have been greatly increased within the last fifty years, and have thereby been the cause of a very great increase of noxious insects, the following may be mentioned :

Fifty years ago the name, Tomato, was as much of an enigma to most people as Greek and Latin. Occasionally a few of the plants would be seen in a flower garden, where they were grown merely for ornament, and the fruit was called Love Apples. How is it now? We all know how it is. Thousands of acres are devoted to this valuable plant every season, and immense quantities of the fruit are eaten fresh during the summer and fall; large canning houses have been erected, and millions of cans of this valuable fruit are prepared for winter use. Many families would as soon think of going without Potatoes as Tomatoes. Careful cultivation has enabled the grower to produce a fruit far superior to the original in size, shape and flavor.

It is well known to entomologists that a particular species of insect will be found

feeding on a family or genus of plants, and is never seen outside of it, but like pronounced epicures, they have a choice of food even in the same family of plants.

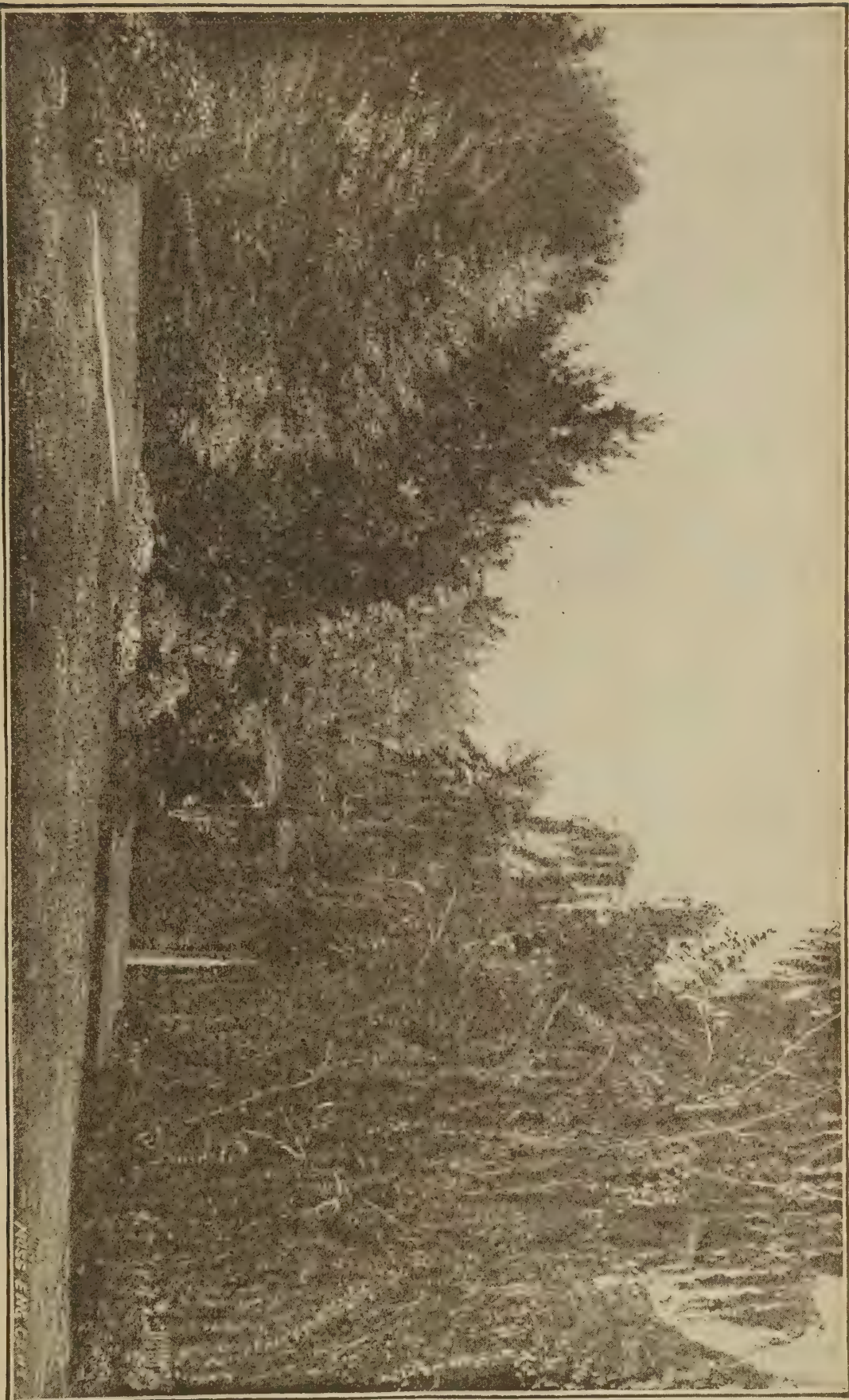
The old-fashioned potato-worm is the same species that is now called the tomato-worm. The potato-worm, as it was formerly called, was never found common enough on the Potato to do any harm; but as soon as the Tomato began to be cultivated it began to increase, and is now a very common species. Various means are now employed to get rid of this greedy gastronome. It will feed on any of the *Solanum* family, but does not increase to any extent except on the Tomato.

The Colorado beetle was first described by THOMAS SAY, a Philadelphia naturalist, in 1825. He found it feeding on a wild Potato, probably *Solanum tuberosum*, in the mountains. As the stock from which all our Potatoes came is alpine, it is not strange they should be found there, and there it would have remained to this day had the western country remained unsettled. The settling of the country necessitated the planting of Potatoes, and all the beetles had to do was to step down from their high places and help themselves, and, as everybody was going west, they thought they would reverse matters and go east, and as they found plenty of good eating and lodging places along the route it was a pleasant journey, and here they are, the most formidable foe to the Potato the farmer has ever encountered, one that has taxed the energies and ingenuity of our ablest entomologists to devise means whereby its ravages may be checked.

Where would our Currant bushes have been to-day if the fruit-grower had not used plenty of Hellebore, which seems to be the most effectual remedy. This pernicious saw-fly is a foreigner, and was probably brought here on the English Gooseberry. It has few enemies, and if not disturbed increases at a prodigious rate.

Before the currant worm made its appearance, this valuable fruit was very cheap. It has an advantage over most kinds of fruit in remaining a long time on the bushes without injury; indeed, the longer it remains on the bushes the sweeter it grows. There are several native species of larvæ that feed upon





GROUNDS OF GEORGE ELWANGER AND ADJOINING PLACE.



the Currant, but they are not common enough to do any harm.

The Carrot, Parsnip and Celery are cultivated extensively, and are the food plants of the larva of a large butterfly. Formerly this larva fed on *Cicuta* and other wild plants belonging to the same botanical family, but as the country is being cleared up and their natural supply is cut off, they resort to the gardens and fields where Celery, Carrots and Parsnips are grown, and often do great damage.

The Basket Willow is a prey to a large number of noxious insects that a few years ago were seldom seen. Some of these intruders were so rare that en-

tomologists found difficulty in procuring them. And so we find, in every instance, where any crop is greatly increased its insect enemies will increase in the same ratio, while their natural enemies, not being thus favored, do not, and cannot, increase in proportion.

In conclusion, it may be said that the future will be a great struggle between the tiller of the soil and noxious insects, with a great advantage on the side of the latter. We shall need more entomologists; every farmer, gardener and florist must get a better knowledge of these insidious enemies that beset him on all sides.

ROBERT BUNKER.

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### OUR NATIVE PLUMS.

If, as we are told by Dr. GRAY, the European Plum, *Prunus domestica*, has its original in the almost inedible sloe, and yet there have been derived from it such a multitude of delicious varieties as we now cultivate, what may not be hoped, as the result of high culture, crossing and selection, from native species like those

of the American continent, which, when merely growing wild in thickets along the water-courses, send such waves of rich perfume across the land leeward? It seems to me that in these native Plums we have the easy potentiality of a class of fruits that will give to the "cold north" a two months' supply of fresh fruit which will, in time, abolish all regret that the Peach, Nectarine and Apricot are denied to them by a vigorous winter. For it is a fact that our *Prunus Americana* has a range far north of our national boundary, being, in fact, the hardiest of all tree fruits. It is of the most easy cultivation, and very susceptible of improvement. If it were not already, in its wild, uncultivated state, so good, we should have, unquestionably, long ago, sought to improve it. As it is, we find it nearly everywhere north of the range of *Prunus domestica* produced so abundantly in its season as to be almost destitute of any settled commercial value, which can only be imparted to it by the production of improved sorts, superior in size, beauty and flavor to the too abundant wild products.

For canning or preserving, even these are by many (myself among them) re-

garded as quite equal to the Peach (as we get it); and, in fact, superior to most of the fruit which reaches us. But nothing is more evident than the easy susceptibility of *Prunus Americana* to rapid improvement.

I have been collecting the best sorts I could find or hear of, east and west, and year by year I am increasingly convinced that no fruit we possess submits itself to such speedy and easy improvement. So far, selection only has been secured to suffice to fill the desires of collectors; but this cannot be for long. Our younger pomologists of the "cold north" will assuredly soon devote themselves to the growing of seedlings from the best cultivated selections, and to crossing the eastern and western varieties with *Prunus domestica*. It is possible that the possession of the newly imported Russian Plums may delay these experiments a little; but eventually, I think, these will only serve as additional elements in the development of the entirely new and superior strains. Perhaps I may be too sanguine, yet I fully anticipate the production, in the not remote future, of a race of iron-clad Plums of the largest size, unrivalled flavor, easy growth, and profuse productiveness.

Among their many merits, what are the faults of these Plums? Nearly all of them have more or less bitterness—a very common fault of wild fruits, though some of them are "dead sweet"—and none the better for that. A little suspicion of the peculiar tang will not be ob-



jected to in the most improved sorts, for even in the worst natives it is not now nauseous, but rather a tonic bitterness that we perceive.

Another, and perhaps their most evident defect, is the soft and watery character of the pulp, and in the eastern varieties the tenderness of the skin, which makes them incapable of transportation. From western varieties quite a number of selections have been made with tougher skins, and these crossed upon with the *P. domestica* and the Russian varieties, will, most probably, heal this defect. The watery pulp will also disappear in the same process, while the size will rapidly increase, not only as the effect of crossing with larger sorts of different species, but as the natural consequence of selection and culture.

In quality, the best western sorts which I have been able to secure are neither better nor worse than the eastern sorts,

and they are certainly inferior in size to many of the latter. The most distinguishing mark by which the two are differentiated is the form of the seeds, which are much plumper and rounder in the western Plums; in this respect, as in the firmness of their skins, approaching more nearly to the *P. domestica* type. The colors are almost invariably shades of yellow and red, but occasionally the latter is seen to verge closely upon purple, so that it would probably not be difficult under the effect of *P. domestica* pollination to produce on this fruit all the usual colors to which we are accustomed in our Plums.

One great distinguishing merit which belongs to our native Plums, aside from their hardiness, is their exemption from "black knot," and, in fact, from most of the diseases and weaknesses of the *P. domestica* varieties.

T. H. HOSKINS, M. D., *Newport, Vt.*

## FALL PRUNING GRAPE VINES.

I advise the practice of fall pruning for Grape vines over that of spring pruning. I do this because in the fall the ground is hard and firm, and as Grape vines are often a part of the garden fruitage, it is more desirable to stand upon a dry, firm soil while pruning than upon a wet one, as is often the case in spring. Then, too, the weather is more propitious. In the spring the weather is frequently so unfavorable, even until quite late, that outdoor work is almost always delayed. The cutting winds of March are far more severe than the temperature of November, and one not accustomed to great exposure frequently dreads to perform this labor at a season as early as necessary. The weather, however, would furnish but a shallow reason were it the only one, but it is not. My vines have done better the next season after fall pruning, and have borne more Grapes than when pruned in the spring, and this fact is worth more than a thousand theories and opinions. I am not aware that any exact experiments have been made to test this point; in my own practice the difference is sufficiently marked to warrant my adhesion to fall pruning, but if the product of the vines is no greater the advantages are still with fall pruning.

I gain time by pruning in the fall, for where there are many vines it takes time and care to have all in readiness for the early spring starting. If, as in some latitudes, where the climate is especially severe, it is most desirable to lay the vines upon the ground for covering, either of snowfall or by artificial means, such as the use of corn-fodder, evergreens or earth covering, when pruned in the fall they go into these winter quarters ready for an early spring resurrection and reinstatement upon frame and rack, which is much more quickly and comfortably done than if they were yet to be pruned, while at the same time they need not so great an amplitude of covering. In some of the Western States the continued snowfall furnishes sufficient covering, and the vines emerge in the spring well prepared for payment in a full fruitage. In soils adapted to Grape culture, proper pruning and thorough cultivation are of much more importance than enriching the soil. Indeed, much manure is not needed unless the vines are worn out, or losing vigor, when a full manuring will furnish, as it were, new blood and vigor. Fall pruning should not be done until all the leaves are off—as late as possible with comfort.

H. K.



## GOLDEN ROD.



Wouldst know the  
flower of queen-  
liest mien,  
Which ruleth long  
in her gentle  
reign,  
Which holdeth her  
blooms with  
regal air?  
Then search no  
longer, for every  
where  
Groweth the  
Golden Rod.

Down green lanes  
where the Grape  
vines cover  
Half of the hardy  
hedges over,  
Where dusky  
shadows lie  
asleep,  
And meadow  
grasses grow full  
knee deep,  
Smileth the  
Golden Rod.

In nook, and dingle, and wild-  
wood ways,  
Shedding a light  
in the darkest  
days,

Shy as a stranger, but frank as a  
friend,  
Cheer and delight do her blossoms-  
lend,  
Beautiful Golden Rod.

Where marsh and meadow sweep far  
away,  
And plummy Willows in rhythm sway,  
With lazy brooklets which loiter by,  
Reflecting the gold of the sunset sky,  
Shineth our Golden Rod.

"Golden Queen," she calls to her feet  
Subjects loyal, and fair, and sweet;  
Gay court ladies of winsome face,  
Rarest raiment and dainty grace,  
Bow them to Golden Rod.

That fragrant mint of the Lilac  
Fringe,  
And Asters of royal purple tinge,  
Fairy frost-flowers' airily white,  
Sunflowers daringly, dazzlingly bright  
Gather round Golden Rod.

And bristling up from their grassy  
beds,  
With brave, broad faces and helmeted  
heads,  
Some sturdy soldiers in pink and  
brown,  
And black and yellow, come bustling  
down,  
Guarding our Golden Rod.

And one she chooseth from out the train,  
To share the throne of her royal reign;  
Fair sister queens of the autumn hour,  
The Aster, of royal purple dower,  
And sun-bright Golden Rod.



"Speaking endurance, vigor and light,"  
 "These blossoms tell us of freedom" bright,  
 Types of the nation we love to own,  
 Yet one fair blossom is ours alone,  
 National Golden Rod.

Everywhere, did we say that she grew,  
 This "sunshine flower" of golden hue?  
 She scarce is known in foreign bower,  
 Our own typical, national flower,  
 Well beloved Golden Rod.

DART FAIRTHORNE.

### A NOTABLE EXAMPLE.

It is very well known that Boston claims superiority rather in the assembling of many advantages than the distinction of any. It has a conservatory of music, that is to say, three conservatories, but what city has not? and an art museum, so has New York; and a university, which Baltimore also owns, and a public garden, like St. Louis. But the city of cool breezes is to be congratulated that its Natural History Society, whose large hall, with its fascinating collections, is one of the group of the Institute of Technology, decides to grace Boston with a new and valuable attraction, a scientific garden, an improvement on the models which make Europe famous. The trustees of the new Franklin Park, in Dorchester, cede a large tract lying along the bay to the Society for a natural history garden, comprising not only a botanical garden, where collections of plants in full varieties will flourish, but experimental grounds, quarters for naturalizing birds and animals suited to the climate, and aquaria of noble size in the salt water of the harbor. The interest of such an undertaking can only be judged by students of natural history, for whose use and benefit this magnificent project is intended, as well as for a great educational pleasure ground for the people. It is scarcely possible to exaggerate the interest or the benefit of such a public garden, not a mere display of gaudy carpet bedding and *tours de force* of gardening, but where the florist, enamored of the descriptions of Alpine and Caucasian Anemones, for instance, may find them glowing in their season, or when the rich flora of the Pyrennees, or the North Carolina mountains may be acclimated with skill to the enriching of our home gardens—where, also, the culture of economic plants may have that attention deserved by one of our chief national interests.

The wealth of our fields out does, the yield of our mines of gold and silver, a thousand-fold already, and the wealth to

come lies at the surface of the soil, not miles below it. The time will come in less than a hundred years when men will cease to lead unnatural lives in dark and noisome caves, mining for metal, since its equivalent can be found in vegetable forms. Fiber in shape of compressed paper supersedes iron and steel for most important uses. Kerosene is less valuable a fuel than castor oil and a dozen other seed oils to be named; the ashes of certain plants form the basis of most beautiful enamel.

But I will not go farther in this direction just now. After rehearsing a few facts of the kind, known by every tyro in botany, to a noted politician and financier, he refused to hear farther of them, declaring they were too startling, and he could not verify them, though I might. Nevertheless, it is true that the very weeds of our country have in them the very sources of wealth. The pests of our gardens might outrival the valuable drugs and dye-stuffs of the East Indies if we knew it, as our botanic gardens will one day prove. And many rare plants of convenience and food from the South African highlands and the Himalayas may be acclimated here as well as the African Geraniums and Indian Jasmines.

This also comes within the promise of study gardens. It is more likely to be accomplished by a society of enthusiastic, scientific men than by a government department, for the reason that government officers feel themselves independent of all responsibility the moment they are in office. I should say, of all responsibility save that of keeping on good terms with party chiefs.

Botanical gardens are new here, but are part of the public grounds in every capital of Europe, where they have fostered the celebrities of science. Boston makes a good beginning, which, let us hope, will be quickly followed in every town of size in the Union. The great want of society in general at this time is



fresh and engaging interests for every class. Something to interest young men, and workingmen, children and their elders, beside the usual run of amusements and social routine. People are growing tired of playing and money-making all the time. The want will be met in experimental and applied science, not the dry dosing with books, but that gra-

cious form of it which takes us out in light and warmth to try conclusions with nature in dealing with animals and plants. There is a work to be done for this great country, such as the Royal Gardens at Kew have done for the Empire of Great Britain, only America will need many such royal harborings—a Kew in every State.

SUSAN POWER.

### GESNERIAS.

These plants have long been left to the professional florist; and the amateur, while greatly admiring, never thinks of succeeding with them, and so fails to try his skill. When I first attempted their culture, one of my friends said it would be of no use, as she had had several and they all died. But I was determined, if possible, to succeed, and my efforts have been rewarded, and I am thoroughly convinced, after a trial of several years, that whoever desires may have these plants, even with moderate conveniences, and they are well worth the necessary care, as the admiration of all who see a well grown plant of this class testifies.

*Gesneria exoniensis* is the special variety with which I have experimented, and this has beautiful velvety leaves mottled in crimson and green, and is very desirable for a foliage plant before it blooms. The tubers are composed of tiny scales, resembling a cone in shape, and of a light green color. These multiply, one producing two the next season, the old one dying after these are grown. They can also be propagated from the scales and from the leaf. After blooming, the plants begin to droop and prepare for a rest, which generally lasts about two months. They may now be cut down and set aside; it is best to keep them in a moderately warm room, and the soil moist, never allowing it to get dust dry, and also taking care not to over-water, as this will cause the tubers to rot.

When they begin to show signs of life, and the tiny leaves get well started, it is time for repotting. They can be easily divided, but it is preferable to put several in one pot, as they make a much better display. The soil may consist of good loam with a small quantity of sand and some fertilizer mixed. The plants grow rapidly when they begin, and need liberal watering, being careful not to let any drops fall on the leaves, as they make brown spots on the velvety surface, which never disappears. They do not require sunshine, a good strong light suiting them much better. After the flower buds appear they must be guarded against changes in temperature, as a slight variation causes the buds to fall. The foliage is so very pretty that it hardly needs the added charm of flowers to complete its beauty, and I was surprised when the forming buds were noticed for the first time, and pleased to see them expand into bright colored bells of scarlet with orange lining spotted with red. These are so arranged on the peduncle as to hang in a circle, and when these fade a circle above blooms, and so on continuously. This is the crowning beauty, and when the flowers have all fallen the plant shows signs of rest again. By forcing, however, and having a succession of plants to start into growth at different times there may be a long blooming season.

EVALYN.





## FOREIGN NOTES.

### NEW ROSES RAISED AT LYONS.

President Dutailly (F. DUBREUIL).—A strong grower and very hardy, having the dark foliage of the species. The flowers are of medium size, cup-shaped, and almost full. The flower stems carry from three to four blooms, and the color is of a fine dark crimson, slightly tinted with purplish-brown, lighter in the center. It is remarkable as being the first Perpetual Provence of its class.

Tea Mme. Carmen.—This is of the style of Gloire de Dijon, and a seedling from Mme. Berard. The flowers are produced singly, very double and medium in size, with the petals dense and crumpled. The color is of a light fresh rose, slightly tinted with yellow. It has brilliant foliage, and is very perpetual.

Tea Joseph Metral (BERNAIX).—Foliage small and dark; flowers very abundant, sometimes twenty to twenty-five on the same stalk; bright crimson, very full, good size.

Dwarf Perpetual Polyantha Blanche Rebatel (BERNAIX).—This grows from twelve inches to eighteen inches in height, and is exceedingly free-blooming. The flowers are about one inch across, the color bright crimson, slightly striped with white. The first of that color in its class.

Tea Mme. Cambon (BERNAIX).—Foliage small and dark; flowers bright yellowish pink, and sometimes wholly white, or nearly so; medium in size, semi-double, and very free; it has also fine buds.

Tea Mons. Desir (PERNET PÈRE).—This has dark foliage; flowers solitary, dark crimson, tinted purplish-brown, of medium size and nearly full. It is a free bloomer and strong grower.

Souvenir de Joseph Pernet (PERNET PÈRE).—Strong grower, the foliage dark; flowers large; fine shape, nearly full, very round petals; the color is a very brilliant light crimson, edged with dark purple; it is a very free bloomer.

Hybrid Tea Comte Henri Rignon (PERNET-FILS-DUCHER).—This is of rather dwarf and bushy habit, with small and

dark foliage. The flowers are borne singly, large, and are of fine shape, the color being very light rosy salmon. It is an abundant bloomer and very hardy.

J. SISLEY, in *The Garden*.

### MINA LOBATA.

This pretty trailing half-hardy annual, which flowers very freely in quite a small state, may be grown in pots for conservatory decoration during the summer months, and is a welcome addition in variety at this time of year. From seeds sown early in March we now have plants, in pots varying from five inches to ten-inch sizes, flowering freely. Good turfy loam and one-third leaf-mold suits them well, and grown in pots of the above sizes, with one center stake, or three round the sides of the pots, the plants carefully tied, they make a variety among flowering plants. The flowers are produced on double racemes, standing erect and well out of the dark green foliage. The buds are of a reddish-orange color, yellowish-white when expanded. The flowers open in succession from the base of the raceme, and have a pretty appearance, also lasting well in water when cut. The plant is also adapted for covering bare walls, &c., growing quickly and flowering freely in a warm position.

C. HERRIN, in *Gardeners' Chronicle*.

### ELEGANT TABLE PLANTS.

There is something yet to be desired in the class of plants usually employed for table decoration. At the present season Coleuses are a good deal run upon, but though they are bright and showy and are easily grown, they can hardly be called elegant. Ferns, especially selections from the large family of Maidenhairs, and Pteris are always useful. Unless the room is a very large one, no plant, in my opinion, should exceed one foot or fourteen inches in height, and even if the room and the party are large, no plant on the dinner table should be higher than is above set down, but a few taller plants may be grouped or used as single specimens on the side tables, or to



fill in fire places, and break up angles and furnish recesses in the room. The following list offers a good selection of easily grown plants for table work: *Cocos Weddelliana*, *Aralia elegantissima*, *Croton angustifolium*, *C. Johannis*, *C. majesticum*, *Pandanus Veitchi*, *P. elegantissimus*, *Aralia leptophylla*, *Dracæna terminalis*, *D. gracilis*, *D. Cooperi*, *Cyperus alternifolius variegatus*, *Geonoma gracilis*, *Adiantum cuneatum*, *A. scutum*, *A. Farleyense*, *Ananassa sativa variegata*, *Reidia glaucescens*, and *Caladium argyrites*. Small, well grown *Adiantums*, in two and one-half-inch pots, are useful for dotting about the table on certain occasions for a change. To get color into the *Crotons* and *Dracænas*, they must be grown in a light position, and the *Pandanus* potted in rather poor sandy peat.

E. H., in *The Garden*.

#### HELIANTHUS MULTIFORUS PL.

This is one of the few plants that seem to defy the elements, for although it has rained daily for the past fortnight it is covered with its bright yellow flower heads. It thrives amazingly in the neighborhood of towns; in fact, it seems at home in any position where the soil is fertile. For the past three weeks it has been particularly conspicuous amongst clumps of dark foliaged *Hollies*, and will continue until severe frosts set in. Light frosts that will destroy *Dahlias* do not appear to injure it in the least. If these plants are allowed to grow undisturbed for a few years, clumps of large size are formed, carrying hundreds of flowers serviceable for cutting. We have found it one of the most useful plants in the garden for supplying flowers for church dec-

orations; it appears specially adapted for harvest festivals. All who have to supply flowers in quantity for decorations of this description, and do not object to the color, will find this double *Helianthus* one of the most profitable plants that can be grown.

It is easily propagated by division. The best plan perhaps is to lift one good plant early in the year, and scores of small fleshy tubers will be found. If these are placed in boxes, or singly in pots, and placed under glass, they will make strong plants with a single stem by the end of May, when they may be planted outside. They will produce a few flowers the first season, but the second they will be strong plants, and flower profusely.

G., in *Journal of Horticulture*.

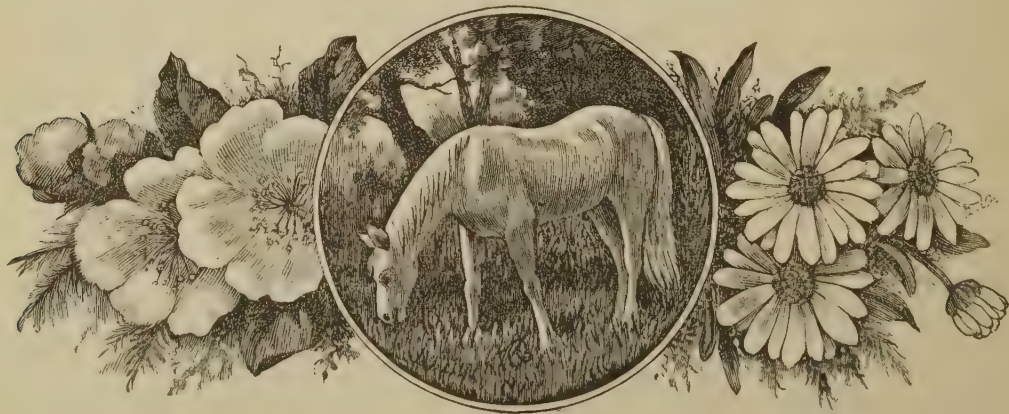
#### ROSE Mme. GEORGES BRUANT.

Rose Mme. Georges Bruant has been flowering since June. It is also sending up long shoots, which show its affinity to *R. rugosa*. Bushes six feet high and smothered with semi-double flowers form quite a mound of white. Judging from the vigor of a young specimen planted in May, it soon attains large dimensions. The flower buds are very beautiful, many of them being from one and one-half inches to two inches long and sharply pointed.

*The Garden*.

#### MOUNTAIN ASH BERRIES.

Take them off when ripe and place between layers of hay, and they will keep plump for a long time. So says some one who has tried it, and adds that he had kept them plump and attractive in that way for a year.





## PLEASANT GOSSIP.

### FAREWELL TO THE FLOWERS.

The beautiful Lilies have drooped their heads,  
The brave little Pansies lie low with fear,  
For the Frost King's breath has blown o'er their  
beds,

And the icy monarch of winter's near.  
Nothing remains of the sweet autumn flowers,  
Blooming so bright but a short week ago;  
Stripped of their wealth are the floral bowers,  
Soon to be covered with mantle of snow.  
The Live-forever, with fear, has turned white,  
And the Asters, bright in their royal dyes,  
Are sinking to earth as with sudden flight;  
The Golden Rod, brown, on the hillside lies;  
All, all have drooped 'neath the Frost King's spell—  
Beautiful blossoms of autumn, farewell.

LILLA N. CUSHMAN.

### AMARYLLIS—PROTECTING ROSES.

Please oblige a subscriber by answering the following in the MAGAZINE:

An *Amaryllis* of some species, of which I send you a two year old bulb, by mail, has never yet bloomed. It is five years old, and the base of the bulb is six inches in diameter. It is now growing in a twelve-inch pot, and in good soil, sandy loam, old manure and a little soot mixed. Since I have had it, it has shown no inclination to bloom or cease growing. The leaves are fully four feet long. An *A. regina* is just the same age, and does the same way, except that its leaves die every winter. My experience with *Amaryllis* is that they are poor house plants. Can you suggest any way of making them bloom?

Will Roses survive the winter if protected in the following manner? Put on sufficient evergreen branches to bind down the plants, then a good layer of straw, hay or leaves, and on top of this enough branches to keep it from blowing away. My experience has been that any material that rots easily will, if in direct contact with the bushes, kill them.

Would the same method be good for Pansies, Daisies and Wallflowers, or other plants which keep green all winter?

Is there any species of *Asparagus* of climbing habit which is as hardy as the garden sort? Several kinds are mentioned in different seed catalogues.

P. H. A., *Arcola, Ill.*

By taking the water away from the *Amaryllis* plants and letting the bulbs go dry for three months they can be compelled to rest. When starting into new growth do not repot them. The pots will become filled with roots and bloom will follow.

The protection proposed above will probably be sufficient for the Roses. For Pansies, Daisies and other plants in leaf a covering of evergreen boughs alone will be enough.

We know of no species of *Asparagus* as hardy as the common garden sort.

### DISEASED ROSE LEAVES.

All of my Rose trees, as well as those of my friends, are infected with a sort of disease or fungus. I enclose a leaf for inspection. I have noticed for several years, at the end of summer, they become diseased, brown and dry, and fall from the bush at a touch. I have paid no attention to it, particularly as it appears late in the season, when the growth is matured; rose rust and mildew seem to do little injury at that time. Now, however, comes the comforting news that any Rose garden infested in this way is doomed; it means, in time, death to the Rose, and still worse, this authority declares no Roses should again be planted on any site where this disease prevails. Now, can you, through the MAGAZINE, inform me if all this is true? Is there no remedy for this disease? Must one stand idly by and see a Rose garden, which is one's pride and delight, succumb to this fell malady? Any enlightenment from yourself or readers will be anxiously watched for.

A SUBSCRIBER, *Lockport, N. Y.*

We are unable to give the scientific name of the fungus on the Rose leaves received. However, we do not think it is so great an evil as "A Subscriber" seems to fear, for we have seen it on Rose leaves for many years without apparently doing them damage. We should give the Rose beds, this fall, a good coating of well rotted manure, allowing it to lie on the surface, and in spring dig it lightly in. Keep up the fertility of the soil in this manner from year to year.

### AURATUM LILY—ASPARAGUS.

With the following note came a photograph of a fine specimen of *Lilium auratum* in pot.

I send you a picture of a superb Japan Lily that an enthusiastic horticulturist, Mrs. WILLIAM PEASLEE, of this place, has in her possession. The blossoms measured fourteen inches across, were borne on the summit of a slender stem three feet in height. The plant is in a six-inch pot, and it is in its first year of blooming.

Will you please tell me what kind of treatment to give my *Asparagus tenuissimus*? It does not seem to thrive.

L. M. N., *Taylor's Falls, Minn.*

This *Asparagus* in the house will do well in good rich soil with the heat of a warm room and somewhat moist atmosphere.



**ACHANIA—ECHEVERIA—CACTUS.**

Please answer the following in your "Pleasant Gossip."

I have an *Achania malvaviscus* growing and blooming in a six or seven-inch pot, which is full of roots, even coming through the hole in the bottom. Shall I leave it alone, or move it into a larger pot? I want it to bloom as long as I can keep it from freezing this winter.

I have two *Echeverias* in different five-inch pots. I would like to know why they do not grow larger or spread. They are the same size they were three years ago; the outside leaves die off as soon as new ones grow. Shall I plant them in the ground next spring? Tell me what you think of them.

I wish some experienced person would write about Cactus. They are favorites of mine. I have about a dozen nice plants; my prettiest one looks as if it would die. I fear I have watered it too much.

EASTERN OREGONIAN, *Burnt Ranch, Oregon.*

Do not report the *Achania* now. It can remain in the pot it is now in until next summer.

Probably the *Echeveria* and the *Cactuses* should receive less water than you are accustomed to give them.

**CYPRIPEDIUM PUBESCENS.**

Will you allow me, through the columns of the MAGAZINE, to inform LENA LESLIE that the Orchid, *Cypripedium pubescens*, mentioned in your August number, is found wild in the Cascade Mountains in the western part of this State. One which we transplanted to the garden, three years ago, has flowered twice for us. This is the only Orchid I know of being found in this State.

MRS. D. W. VANSE, *The Dalles, Oregon.*

**FLAVOR AND QUALITY IN FRUITS.**

Under this title, on pages 198-9, of the MAGAZINE for the current year, appears an article from the pen of Dr. T. H. HOSKINS, containing certain thoughts which, while they may probably be, with propriety, applied to buyers of fruit in more eastern markets, seem, at least, in some more western markets, to find but a modified application.

That the fruits usually offered, especially in our larger cities, are mainly of a low grade is doubtless very generally true, and, to a certain extent, necessarily so, since a higher quality almost infallibly carries with it a more delicate texture, with diminished productiveness and not unfrequently an unattractive appearance.

Such being the case, these are naturally tabooed by the planter for the market, and, hence, it may be more properly

said that the difficulty lies, at least, quite as much with the planter as with the buyer in the city market who, doubtless, would sooner or later learn to appropriate and to purchase the best, could the market but supply it; and just here arises a consideration, and to our apprehension a very important one, which the Doctor seems to have wholly omitted, and which at the same time seems to be too generally overlooked by the great majority of commercial orchardists, that supplying the market with attractive looking fruits of low quality must infallibly have the effect, at least upon the more ignorant class of buyers, to discourage their use and diminish the quantity consumed.

Such facts have recently become so notorious that, at a recent meeting of the Western Michigan Peach Growers, it was freely conceded that the low quality of nearly, if not quite, all the varieties of Peaches, earlier in season than Hale's, tends to diminish the subsequent demand for better varieties, for which reason orchardists were advised to destroy all trees of these objectionable varieties.

Although the discussion referred to only included Peaches, the same objectionable practice also prevails among Apple growers. The rich color and productiveness of Ben. Davis, a Kentucky Apple of third quality, which, as grown in the North, ranks very much lower, is, by a few planters at the North, extensively grown for the market in obliviousness of the known fact that consumers will not only not purchase it a second time, but will not fail, to some extent, to estimate the value of Apples as a whole from this first experience, even though far more desirable varieties may be freely offered.

That the excessive application of this idea has the effect to remand fruit—the Apple especially—to the realm of culinary articles, along with the Turnip and Potato, and to almost wholly exclude it from the dessert, will, we trust, be conceded upon due consideration.

This extreme practice may even fairly be said to be only a milder application of the idea which underlies the use of tартлетan to heighten color, and of the "facing" of packages; the purpose, in each case, being to create the hope to secure more than the reality will warrant.

The unwisdom of such practice must



be the more obvious when we consider that there is no lack of varieties of fair and even of high quality, which, so far as market qualities are concerned, rank very little, if at all, below the objectionable ones spoken of; and which, if once well known upon the market, would, doubtless, be more largely called for, even at an increased price.

Although the Doctor is correct in assuming that city consumers are by no means critical judges of quality in fruits, it may fairly be claimed that this is not due so much to the lack of capacity to discriminate, as to the failure of the market to afford the means and the opportunity for such discrimination. As illustrative of this, we quote the Rhode Island Greening as a fruit of decidedly unattractive appearance, which, notwithstanding this fact, occupies a commanding position as a market Apple.

We opine that the lack of a supply of better varieties, rather than the poverty of buyers, as the Doctor supposes, may be assumed to be the real cause of the larger consumption of fruits of low quality.

T. T. LYON.

#### WATERING PLANTS.

I have taken your MAGAZINE for a number of years, ever since its birthday, in fact, and it is always a pleasure to me to look over its pages. I find so much that is interesting, and besides, I receive many valuable hints in regard to the care of my plants. In my opinion, your periodical takes the lead of the publications of its class.

I am one of many who love flowers and are limited in accommodations for them, and so have to struggle against some obstacles in their culture, particularly through cold weather. One of the things which troubled me most was the watering—it was so easy to splash water and mud over the sides of the pots and down on whatever might be below or around, unless I was exceedingly careful. But now I have a more excellent way. I cut out strips of tin, which is supplied by *passé* tin cans, and bend them into the form of cones, varying from one to two and a half inches in diameter at the mouth, and in length being two-thirds the depth of the pots, the larger sizes, of course, being for the larger pots. I plant these cones, one in a pot, at the side, a

little distance from the edge, with the seam turned toward the root of the plant, and the top sunk to a level with the earth. It is an easy matter to introduce water from the nozzle of a sprinkler, with no danger of slopping, and the earth is not hardened as it is where moisture is applied externally.

Of course, it is a little trouble, but who begrudges that when the plants are concerned? The cones do not rust out for some time, and when one is potting the plants it takes only a second to insert them.

I rejoice in your success in the past, and wish that you may be prospered in the future far more.

C. A. B., *Boston, Mass.*

#### APPLE BUTTER.

About a year ago, you asked whether the making of the above was among the "lost arts," and to judge by the recipe for making it which a writer gave you, I don't wonder. I will give you the old Pennsylvania plan, that we used to make by, and which we still follow here fifty years later.

If people will follow this, and they then say the art is lost, I will quit giving instructions. To forty gallons of good sweet cider made from sound, ripe Apples, use three bushels of select Apples. The cider should be boiled down to one-third or a little less before putting in the Apples, which should be pared clean, all specks, bruises, seeds and seed cavities removed. They may be quartered, or cut into eighths, if very large. If in a hurry, the Apples can be boiled in a little water before putting into the cider. Stirring should commence as soon as the fruit gets soft, and be kept up carefully until done. At all times prevent the flames of fire striking the kettle above the line of contents.

When boiled down to ten gallons it will be done, and it will be an article fit for a king. Put in earthen vessels, and, when cold, dip clean white paper into good whiskey or brandy, and lay it over the tops. In four months from making, if kept in a garret (the best place), the jars can be inverted on a floor or shelf without running out. Will keep for years, and if made with the right kind of Apples, such as Rambo and Smokehouse, or Bellflower, will become as smooth as cheese.



There are establishments, out west here, where they make what they call apple-butter, but which the knowing ones call "sass," that sells for twenty-five cents per gallon. I would not take it bestowed, as it invariably ferments, and is a poor article at best.

Such as we make would command at least double as much, but even that won't pay unless one is fixed to make it on a large scale. But there are many things that can be afforded for one's own family use that cannot be made to sell at the market price.

S. MILLER, *Bluffton, Mo.*

#### AUTUMN LAWN WORK.

I have no doubt that at the North all those bulbs which in gay procession will march in the spring, next year, are safely tucked into their beds by this time; but, at the south, planting will continue until Christmas, for in November comes our Indian summer, and a glimpse of its soft, blue, misty sky is the last thing many a bulb sees before it is covered head and ears by a brown earth blanket.

I have just been taking up some Hyacinths, removing the little bulblets from about the base of the fine named sorts, and transplanting them. They will probably throw up flower stalks next spring, but I shall cut them off, let the bulb grow strong, and expect fine spikes from them next year. Left on the old bulb, they weaken it, and treated in this way you can soon get a fine bed of bulbs that will give flowers almost as good as those of the parent bulb, and the knowledge that you raised them yourself will make up the difference.

I have a very pale blue Roman Hyacinth that increases very rapidly, and is almost as sweet as the dainty white ones. Hyacinthus candicans, a stately relative of theirs, is going to sleep beside them this winter, and show off amid the Gladiolus next summer, for I know it is perfectly hardy, and I had much rather trust it out of doors than in the house.

I fenced the moles away from my Tulips, last autumn, by driving stakes about an inch apart around them, and in the spring they well repaid me for the tedious process. No flower, it seems to me, touches the extremes of beautiful coloring so nearly as the Tulip, with delicate tints and almost imperceptible shadings,

flaming color, and rich, dark lines. My Duc Van Thols bloomed out on the lawn in February, when naturally they would be admired most; the rich canary yellow of some of the waxen cups, soft pink, creamy white, clear, vivid, glowing scarlet were each, in turn, declared most beautiful. They bloom so early here that it is not necessary to shade them from the sun to keep the bloom perfect, as in some localities. Mine were beautiful for more than two weeks. At night I threw a light covering over them to protect from frost. Taking the bulbs up, this week, I find the fence still mole-proof, bulbs safe, and a large increase to transplant.

I saw a bed of Anemones, this spring, and wondered why in the world I had never planted any, for they were, next to the Tulips, the most brilliantly colored flowers I ever saw. Planted in masses, the effect is so different from that of single or grouped bulbs. One, a beautiful double, white, softly flushed with pink at base of petals, within and without, reminded you of a smiling, sun-kissed, snow-fairy. The queer looking tubers, of a dried-ginger appearance, are hardy here, and planted five inches apart, three deep, and mulched lightly, will flame out brightly quite early in spring. The single varieties are most brilliant, but the double ones have such dainty flushes and shadings upon light grounds.

The double Ranunculus, dainty little round balls of canary yellow, are hardy here, too, and if planted in a cool, shady, protected place, bloom beautifully. It is strange they are not found oftener upon southern lawns.

And why do not more people plant the Iris, peerless in form, coloring, hardiness, scent and association. I. Persica is sweetest of them all, though smaller in flower, and it can be made to bloom in winter. Iris grows well for me wherever Pansies do, and I plant them together, thus giving support to long, ambitious Pansy branches, and a cool, pale green background as a setting for the cunning baby faces to lean lovingly against.

My Snowberry bushes, white with globules of a condensed early frost, remind me that some one asked about them in the MAGAZINE, once upon a time. Our garden abounds with them, and I will willingly divide. LENNIE GREENLEE.



**THE MOON FLOWER.**

The little plant of the above, that I got of you in the spring, along with the Roses, was put in a hot-bed to give a start. When about two feet high it was set out in a conspicuous place to a strong pole about twenty feet high. When the shoots began to start out, three shorter, thin poles were set two feet from the center and shoots trained to them. It did not take long to make a cone-shaped affair, and by August had made a pillar of equal diameter from base to pinnacle.

Few things have given us more satisfaction for years. It commenced blooming about the middle of August, and has been in full blast ever since. Closing in sunshine, but open at night and on cloudy days. This day (October 9th,) it has been in full bloom, sometimes as many as one hundred flowers open at one time. These white flowers, nearly four inches in diameter, with the dark background, make a fine show. The fragrance is pleasant, but a little of it goes a long way with me. Although, a few miles out in the country frost has scratched all tender plants, while here all is fresh yet, the Moon Flower among the rest. S. MILLER.

**GARDEN ESSAYS—A SOUVENIR.**

We have now in preparation, and it will be ready to send out in December, a neat volume of GARDEN ESSAYS. A copy of this volume will be sent to every subscriber to the MAGAZINE for 1889, whether singly or in clubs, excepting as follows:

*We do not send a copy of Garden Essays to those subscribers who take advantage of our low subscription list with other publications, or to those who subscribe through dealers or publishers.*

The volume will comprise most of the *Prize Essays* which have appeared in this MAGAZINE. They are all well written articles, by most competent authorities, and are entirely reliable and practical, and are worthy of a wide circulation.

The following are the titles to some of the articles:

Village Improvements.  
 Annuals in the Winter Window Garden.  
 The Rose as a House Plant.  
 Winter Supply of Violets and Pansies.  
 The Cyclamen, its Propagation and Cultivation.  
 Chrysanthemums.

The Gloxinia.

The Calceolaria from Seed to Bloom.

The Cineraria.

How can Apples be profitably raised?

The Cultivation of the Raspberry for market.

The Cultivation of the Strawberry for market.

Planting and Management of the Grape vine in the family garden.

Blackberry Culture.

Mushroom Growing.

Asparagus for market.

Cabbage—Culture and Storage.

Onions—Field Culture.

The Cultivation of Celery.

Root Crops for feeding Cattle.

Peas, the most desirable for the Market Gardener, and for the table, and their Cultivation.

The volume will be well illustrated and issued in neat style.

Many of our present readers have never seen these essays, which are worthy of careful perusal and to be kept for ready reference; in their collected form, we believe, they will be most acceptable to our readers.

The volume will be sent free to every subscriber to the next volume.

**THE WORLD'S FAIR AT PARIS.**

The Universal Exposition of 1889, at Paris, promises to be one of the largest and most successful of the world's fairs held in recent years. Elaborate arrangements for the reception and display of the exhibits are well under way, and unusual facilities both for the transportation of goods from this country and their care are assured.

The Exposition will open May 5th, and close October 31st, 1889, and there will be no charge for space occupied by exhibitors. The commission in New York will forward and return all articles received free of freight charges.

Goods of exhibitors who are unable to go to Paris or send representatives, will be cared for free of all expense, except for unpacking and repacking. There will be no duties to pay except on goods that are sold or consumed. The French regulations state that all objects exhibited will be protected against piracy of inventions or designs.

The Exposition is to be divided into nine groups or departments, as follows:



1. Works of art.
2. Education and processes used therein.
3. Plain and decorative house furniture.
4. Textile fabrics.
5. The raw and manufactured products of mining, forestry, chemistry, etc.
6. Apparatus and methods of mechanical industries.
7. Food products.
8. Agriculture, vine culture and fish culture.
9. Horticulture.

The usual awards of medals and diplomas will be made, but the details as to this have not yet been determined.

W. B. FRANKLIN, Commissioner General to the Paris Exposition of 1889, can be addressed at 35 Wall Street, New York City.

#### A GARDEN LOVER.

Her form is bowed by weight of many years,  
 Her heart made sad by pain and loss and care;  
 The blooming hopes that filled her May-time fair,  
 Have borne much fruit of bitterness and tears,  
 Yet in her eye a cheerful light appears,  
 Yet rings her voice with cordial cadence rare,  
 Of simple joys still sweet to her, her share,  
 Hopes spring with day of cancel doubts and fears;  
 She loves her garden, prizes a new flower,  
 Had always wanted a Geranium.  
 One gave a slip, it grew; warm comfort crumb,  
 Its color fed her eye in wintry hour.  
 Dear memories breathed for her from Bergamot,  
 Blue eyes, long closed, looked from Forget-me-not.

ABBY S. HINCKLEY.

#### CLUBBING THE MAGAZINE.

As the year draws toward its close, we are making preparations for the MAGAZINE for the following year, and to this end have arranged with the principal publications in all parts of the country to supply the MAGAZINE *in combination at reduced rates*. The attention of our readers is called to our advertised list elsewhere, wherein the rates are specified. The list is adapted to our wide extended list of subscribers, and few will fail to find their favorite papers and monthlies therein. *Consult this list and examine it carefully; please mention it to your friends*, so that in making up your yearly orders for papers and magazines *advantage may be taken of the favorable rates here offered*. Those who may desire different or greater combinations than those arranged in the list should write us, and state what they wish *and the lowest clubbing rates will be given*.

There is now time, before it is neces-

sary to order for the New Year, to look over the whole ground and see how your serial reading matter can be procured to the best advantage, *the most and the best for the least money*.

We ask of all of our readers *one favor*—that they *mention our Clubbing List to friends and neighbors*.

#### LILIUM EXCELSUM.

This Lily, a colored illustration of which appears in this number, is a delicately beautiful variety. It is a strong, vigorous grower, frequently reaching five feet or more in height. It is the only variety of this color, and when in bloom it never fails to elicit admiration. The plant is somewhat exacting in its demands, and requires a light and well-drained soil; if these conditions are not observed the bulbs are apt to become diseased and sooner or later fail. In planting it where the soil is heavy we should prepare a bed for it by bringing in sand and giving special attention to drainage. Those who admire and cultivate Lilies will feel that they are well rewarded for extra attention to this variety when they get it in bloom.

#### INDIAN PIPE.

Mrs. J. H. R., of Columbus, Georgia, sends a plant for name. It is *Monotropa uniflora*, commonly known as Indian Pipe, or Corpse Plant.

#### EUPATORIUM.

G. G. S., of Germantown, Pa., sends a specimen for name, which is *Eupatorium ageratoides*. It is easily raised from seed.

#### THE SHADOW MORELLO.

Professor BUDD gives the following as the result of his experience at Ames, Iowa, with the Shadow Morello Cherry, introduced from Poland:

1. It is more perfect in foliage, and much hardier in tree and fruit buds than any variety of the old lists. It has not been hurt in the least by our recent trying winters and summers, and irrespective of winds, storms and frosts, it bears full crops of fruit. 2. It is remarkable for its continued strong growth of wood when bearing heavily on very young and small trees. Our trees, now four feet in height, were literally bending with weight



of fruit, and it often bears in nursery when only two years old from the bud.

3. In leaf and habit of growth it is a Morello of the Griotte type, while in fruit it is a near approach to the Dukes, even to the peculiarity of being bitter in flavor until fully ripe, when it becomes nearly sweet. Its size of fruit and seasons are about the same as the English Morello. But the pit is smaller and the quality for dessert or canning much better.

#### VICK'S CAPRICE.

Among the many thousands of names that have been sent in by our friends for our new striped Rose, the name, Vick's Caprice, has been adopted.

This very novel variety originated with us in 1885, being a sport from Archiduchesse d'Autriche.

The plant is entirely hardy, having borne the winters without protection for the past two seasons. It is of vigorous habit, every shoot producing flowers; the wood is short-jointed, of moderate thickness, light green, and remarkably free from thorns; the foliage is very handsome, being rich and dark.

The flower is large, semi-cupped, very symmetrical and fragrant; the color is a soft, satiny pink, distinctly striped with white and carmine. It is, unquestionably, the best and handsomest striped Rose ever produced.

The time and manner of its distribution can be learned by reference to the advertising department of this number.

#### PROMISING NEW CHERRIES.

Professor BUDD, of the Experiment Station of the Iowa Agricultural College, at Ames, Iowa, who is making tests of a great variety of Northeast Europe and Russian fruits, reports the following varieties of Cherries as promising for Iowa.

This is something of interest to the whole western and northwestern country, where the common varieties of Cherries usually fail, and probably among them will be found several that will stand the test of our severe climate, as they appear to have done at the Experiment Station. Under what conditions these varieties can be obtained at the Station we do not know, but those interested should make the inquiry by addressing Professor J. L. BUDD, Ames, Iowa.

#### VARIETIES FOR CENTRAL AND NORTH IOWA.

Spate Amarelle. Our trees from five to six feet in height were bending with the weight of the fruit this season. Fruit medium to large, color dark purple when ripe.

Schattan Amarelle, or Shadow Morello. The name comes from the mirror-like reflection from the shining skin. Much like the above variety in size, shape, quality and season of fruit.

Gros Lang Loth. Fruit large, roundish, truncate at stem end, nearly black when ripe. Juice colored. Pleasant sub-acid flavor when ripe. Season of English Morello.

Kings Amarelle. Fruit round; pit very small. Ripens with Early Richmond.

Amarelle Bouquet. Fruit much like Richmond in season and quality, but with more grape sugar.

Cerise De Ostheim. It fruits early and is hardier in tree than what is known as Minnesota Ostheim, and bears larger, better and earlier fruit. Tender, juicy and when ripe pleasantly sub-acid.

Orel. Fruit larger than Montmorency, nearly black when ripe, and very mildly sub-acid in flavor.

Shubianca (6m). Fruit smaller and later than the above, black, and excellent in quality.

23 Orel. Fruit much like Richmond in color, season and quality.

Doppelte Natte. Fruit large for its class; skin dark brown or brownish black. Flesh very red and juicy, and when fully ripe of rich aromatic flavor.

Griotte Imperial. Fruit large, dark red, inclined to conical, flesh and juice red. Mildly sub-acid when ripe.

Brusseler Braune. Fruit large, nearly round, purplish red in color, juice slightly red, flavor pure and quite acid.

Lutovka. Fruit large, yellowish red when ripe, flavor pure and sprightly; season late.

Bessarabian (No. 62). Our favorable report of this variety of 1885 we are glad to repeat. It will endure more abuse of tree than most of our forest trees. Our original tree has been cut for buds and scions for five years, taking off all the new growth. Yet the tree is sound today. Fruit large, dark red, firm fleshed, and when ripe very mildly sub-acid.

Sklanka. Fruit large, skin yellow and

red. Flesh yellow, firm, very mildly and refreshingly sub-acid.

Frauendorfer Weichsel. Fruit large, dark red, truncate. Flesh tender, juicy, sub-acid, and good for any use.

Strauss Weichsel. Fruit large and nearly black when ripe. Flesh juicy, refreshing and nearly sweet. A few days later than Richmond.

Lithaur Weichsel. Skin nearly black, flesh quite acid, colored dark red, and with much grape sugar. Most valuable for culinary use.

Griotte Du Nord. Fruit large, nearly black, flesh firm.

Juniat Amarelle. Fruit much like Richmond in size, color and season, but firmer in flesh and better in quality.

24 Orel. The name is not yet known on account of loss of invoice when the one year old trees were imported. Fruit about the size of the English Morello, dark red, firm, colored flesh, mildly acid, season of the late Richmond.

27 Orel. Another strong growing, hardy sort of great promise.

26 Orel. This is the "Lianzkaja Black" of East Europe, which we will send out in the future as "Orel Sweet." Fruit medium in size, black, with very small pit. Flesh dark colored, and decidedly sweet. Very promising as the hardiest sweet Cherry in our collection.

25 Orel. This was spoken of in the Bulletins of 1885 as one of the Vladimar varieties; but it proves to be a Griotte, much like 23 Orel, but some later in fruit and larger in size of tree.

Heart Shaped Weichsel. Fruit large, heart-shaped, purplish black in color, and nearly sweet.

George Glass. In leaf and habit of growth it much resembles Bessarabian. Its fruit also shows a near relationship to that variety. Very promising.

#### PROMISING VARIETIES FOR SOUTH IOWA.

Abbesse De Oignies. Fruit large, round, dark red. When ripe mildly sub-acid.

Red Oranien. Fruit in season and quality much like the preceding.

Amarelle Bunt. Another variety of the Red Dukes much prized in North Silesia for dessert use and cooking.

Duchess De Angouleme. Of Red Duke family. A heart shaped fruit of large size and excellent quality.

Gros Gobet. Fruit large, red. Flesh white, quite acid. and best for canning.

Red Muscateller. Fruit large, and said to be of good quality for dessert and other uses.

Double Glass. A large fruited variety of the Red Dukes, likely to prove valuable south of Des Moines.

Vilne Sweet. Fruit was large, early and sweet. We regard it very promising for trial in South Iowa.

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#### THE SARATOGA PLUM.

A new Plum, called Saratoga, is said to have originated near Saratoga Springs, N. Y., and is described as of large size, great beauty, fine quality and very productive. Its color is a reddish-purple, with a handsome bloom.

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#### VICK'S MAGAZINE.

After the issue of the next number we shall enter upon the twelfth volume of this MAGAZINE. Our growing subscription list and the letters of our readers indicate the satisfaction with which our publication is received. As in the past, so in the future, we shall endeavor to publish in these pages the best and most interesting horticultural information. Without being sensational, the MAGAZINE will be found to afford the most advanced garden ideas. All departments of the garden will receive a share of attention—conservatory and house plants, the lawn, the flower garden, the kitchen garden, the orchard, the vineyard, the small fruits, the laying out of grounds, public parks, village improvements, and all that conserves the public welfare in relation to horticultural matters, from the planting of a seed to national forestry.

Our MAGAZINE is for the people, and as such, the aim is that it shall be pure and practical in its tone, simple but instructive in its teachings, and interesting and elevating in its effects. As for its colored plates, they are made to represent the natural subjects without exaggeration, and by this means are introduced to our readers the most desirable plants, both new and old, in an effective and yet truthful manner. The engravings will continue to form a prominent feature in our pages, as they teach by the eye often more forcibly than the best chosen words. We shall expect to receive the renewals of all our present list



of subscribers, and at the same time a large addition to their number. We ask each one of our readers to show the *MAGAZINE* to neighbors, and especially to mention our clubbing list with other magazines and papers. In this manner we hope to have some assistance from every subscriber, and at this time a little help from each will prove a great assistance.

#### NOVEMBER WORK.

In the open ground the work in the garden this month consists, for the most part, in making preparations for the colder weather, though while the weather continues open more or less transplanting of trees and shrubs can be done, and the soil can be spaded for early spring crops. The hardy bulbs can yet be planted, covering them afterwards with leaves or litter.

Protect Rose bushes, either by tying up with straw, which may be done where the winters are not too severe, and in colder places by bending them down and covering with leaves and straw and evergreen boughs.

Newly planted Asparagus beds, and Spinach should also receive a protective covering of leaves or straw, but it is best to postpone this operation until cold weather actually sets in.

Celery and Cabbage should be put into winter quarters.

Prune Grape vines, and lay down the remaining canes, or not, as experience may have shown to be most desirable.

#### BINDING THE MAGAZINE.

We will bind the *MAGAZINE* in nice cloth covers, for any subscriber, for 50 cents, and return the book, with the post-

age or expressage prepaid by us. If subscribers will send us the eleven numbers in season, we will add the December number and have the volume bound and returned, if possible, before the Christmas holidays. Please give your name on the package when sent, so that we may know to whom it belongs.

#### SEND IN NAMES EARLY.

It will be a great convenience if our subscribers will renew their subscriptions and send in their clubs early. It will aid us very much in arranging our books, save a liability to mistakes and enable us to send the January number so that you will have it to read Christmas Day, or at least look at the pictures, if you are too happy to read.

#### PREMIUMS FOR AGENTS.

For those who will act as agents in procuring subscribers to the *MAGAZINE* we have prepared a list of substantial Premiums, and this list will be furnished, on application, to all of our friends who will give us their assistance in this way. Write and get the Premium List.

#### LOST NUMBERS.

One number more completes the volume for 1888. If any number has failed to reach any subscriber during the year, and the volume is thus incomplete, please send us a postal card, stating what number you need, and it shall be forwarded.

#### CLOTH COVERS FOR MAGAZINE.

We will furnish elegant cloth covers for the *MAGAZINE* to our subscribers, for 25 cents each, and prepay postage. Any bookbinder can put on these covers at a trifling expense.



# OUR YOUNG PEOPLE.

## MAX AND HIS DEMON.

Max paced his mother's sitting-room, moody and restless. A recent talk with his uncle had revealed to him in a new light a certain phase of his own character which was going to require strong resolution and much watchfulness to correct.

He had recently returned from Boston, where he had been trying his "prentice hand" as assistant to the salesman who had charge of the carpet and paper-hanging department in a wholesale and retail establishment. His chief duties had been to tumble over and unroll the great bolts of carpeting, and to slowly turn the wall-paper samples for inspection, putting all in place again as fast as the respective customers left.

With his active brain and restless temperament, this work would have proved too monotonous for endurance, only that he made a thorough study of all the goods he handled, with a view to a higher position in the future—thanks to his mother for the idea. Hence, he had quietly studied the distinctive qualities of each brand of carpet until he knew of what the raw material consisted and where grown—knew the addresses of leading manufacturers in this country and Europe, yes, and of Persia, too, from whence come so many excellent floor coverings, so that whether he handled ingrain, tapestry or body Brussels, wiltons or moquettes, he became familiar with every detail of each. He found enjoyment, besides, in the art which so perfectly imitates nature in the floral designs on fabrics and papers, and marveled at the complication of threads and colors so skilfully distributed as to form the interwoven figures. All this kept the wide-awake youth from becoming weary of his business.

When the "rush of the busy season" had passed by—for which period only had Max been hired—he was paid for his services and had returned home. Why was one so determined to become "master of his business" not retained with a view to his future usefulness? We shall

see. His "chief" had reported him in the office below as having most excellent business qualities, including a native love of order and system quite unusual; but that with every infringement of his ideas and notions of things by his associates his irritation and impatience cropped out offensively, and that these qualities would unfit him for ever being entrusted with an exacting or difficult customer. That was enough; he was allowed to depart.

After Max reached home, his uncle, whose ward he was, said to him, during their first leisure talks:

"And so it seems, that Boston firm didn't find you so necessary to their business that they couldn't conduct it without you."

"What do you mean, uncle?" said the irascible boy, "I staid the time out for which I was engaged."

"I mean two things. First, to learn if you are as hot-headed as ever, and I have. Second, that I had hoped you would be asked to remain in that business house, with a promise of promotion. I did not get you that position without effort. But if you gave those around you frequent touches of that insufferable temper of yours, from which we have all suffered in the past, of course, you'd get no permanent place there, neither could you anywhere else."

"Hold on, uncle; you've got that word, 'insufferable,' in the wrong place. It's everybody's *conduct* that's insufferable. They're continually doing things at the wrong time, and putting things in the wrong place, and hiding things under something else, and forgetting things they ought to remember, and, you know, that's no way to do business. It's enough to exasperate anybody who has got any love of order."

"But, see here, my dear Max, you can't make people over again to suit yourself any more than certain persons, who are very likely to call you cranky, can make you over to suit them. Since you've



happened to be dropped on to this planet amongst such a disagreeable lot, you'd better learn to make the best of them. And you may as well remember that, *unless your personal rights are invaded*, other people have just as much liberty to the exercise of their special methods of doing things as you have to yours, and an equal right to their honest convictions in any matter whatever. So you'd better cultivate forbearance toward those around you, for your criticisms will only be called insolence, while the majority will always be against you, often getting you into a position fitly described by the saying that square-cornered people have to be crowded into round boxes, sometimes, to reduce their sharp angles.

"Besides, no gentleman—I use the word in its true sense—allows himself to disregard the feelings of others, to offensively assail their self respect, to arrogate to himself the only correct opinion, to assume to be always in the right, in short, to ignore that ancient and honored code—the Golden Rule. You are ambitious to learn business and get a start for yourself, but intolerance of what you consider other people's mistakes and short comings will be constantly in the way of your success.

"Employers don't have to go around begging young, inexperienced fellows to accept positions in their business; there are always hundreds to choose from, and the heavy firms are glad of the opportunity the 'busy season' affords for testing new recruits, who may possibly possess the very requisites for working right along into their business. Don't you see?"

"Yes, I see; but, uncle, aren't you taking too much for granted, when you insinuate that I might have remained with the Boston firm only for faults that you only suspect? No one accused me of anything wrong."

"Of course not; for in a house of that grade all personalities are positively forbidden. Even your chief salesman—had he been found inefficient or untrustworthy, would have been called to the office, paid and dismissed, without either party having incurred the additional antagonism sure to be incited by explanatory words. But I see I shall have to explain what I did not at first intend to do—that one of your firm, being an old friend of

mine, wrote to me regretting that so fine a promise of splendid business talent as is yours, could not have been developed in their firm, on account of a defect in disposition which disqualifies its possessor for being either a subordinate or for holding a position involving the control of such. But he hoped that maturing judgment and added years would correct the fault."

By this time Max was burning hot, and so wrought up with chagrin and wounded pride that he sprang to his feet and almost shouted:

"I'll not wait for added years and maturing judgment—," and throwing out a clenched fist, he added, "I've got will enough and sense enough to control this infernal temper now; and I'll do it."

"Be careful," said his uncle to the fiery youth, "that you don't transgress even while resolving. You see only selfish interest in it now, and are determined that nothing shall stand in the way of that. But you must thoughtfully consider the matter in another light, if you wish to secure a sure reform; otherwise you will only act upon it when it is policy to do so, and will vent your spleen at another time and place on unoffending victims—your family, if you have one—which is a most contemptible thing to do.

"There is a principle of *right* and *wrong* involved, which you must respect. Then you will cultivate a kindly consideration for others—their feelings and their interests. Build your new resolve upon a basis of this kind, if you wish it to stand the test of irritating conditions. And now, to conclude, you certainly understand, Max, that only the warmest regard for my sister's son could induce me to do such violence to my feelings as to talk thus plainly to you."

Thus the uncle and nephew parted; and we next find Max, as at first we met him—chafing under a sense of self-restraint he now felt he must impose upon himself—*he*, who had always done everything exactly right—if only other people had done their part as well, there'd never been any trouble.

So for days he went about inwardly foaming at his ill luck, and finally yielding to a mental depression that affected his very walk on the street. His mother rallied him about this. "Do you know," said she, "that a stranger observing your

motions on the street would take you to be a loafer."

"I am a loafer. I've got nothing to do."

"But you needn't advertise yourself as one by sauntering in that listless way, with both hands in your pockets. When next you go out, please, for my sake, walk briskly, with head up, and act as though you had an object in view, whether you have or not. You had no such walk before you went to Boston. I don't understand it."

"I do. I got a taste of business there, and now it takes the life out of me because I can't put into practice what I've learned. I don't believe uncle cares at all."

"Yes, he does. He's been telling me that Mr. Ducat, having heard of your late experience, wishes you now to act as salesman in a similar department in his retail store. But I grieve to say that neither of us can think it best for you to engage with him, because you and he are too nearly alike in disposition to get along together. His clerks are frequently leaving because he is so exacting and impatient. You are the same. How then, would it be when Mr. Ducat, vexed about something, should approach you with irritating questions, or hasty criticisms? You don't like to be questioned, you can't bear to be interrupted when busy, and you raise a small storm if your sisters chance to disturb what you claim as personal property, until they're half afraid of you."

"I know it, mother. Don't say another word. I already hate myself, and I'm going to fight this demon in me until it's vanquished. But I believe that Mr. Ducat, you speak of, might be my cure. While watching for him to flash fire any moment, I could keep cool myself, don't you see? That would be getting cured homœopathically—'like cures like'—you know. Egad! where's uncle?" And the impetuous boy was gone in a flash, showing more animation than he had done since his return home.

Of course, the uncle was willing to believe in his nephew's promises as well as in his power to reform. So, the next we know of Max he is really trying to adapt himself to his new surroundings in Mr. Ducat's store, instead of seeming to expect everything and everybody to be

changed to suit his own particular notions. Of course, his patience has many sharp trials—not so many, as yet, with Mr. Ducat, who sees his capability, as with customers—senseless ones, he thinks them—who don't know what they do want; and another class who disparage the goods, hoping to cheapen them. He'd give a month's salary to be able to say to the first class that they'd better go home and stay until they know what they really want, and whether they've the money to buy it; and to the second class, that if they knew where better goods can be sold at the price, that's just the place for them to go and buy. O, if he only dare!

But, finally, there came a time when Max might have been seen, in the early morning, sitting at the far end of the long sale-room, pretending to read a newspaper, but, in fact, furtively watching Mr. Ducat at the other end, overhauling and mixing up his carefully assorted parcels, a proceeding which at once had so incensed the hot-headed youth that he abruptly took himself away, lest his tongue should betray his wrath. He had cooled off a little when Mr. Ducat approached him, saying:

"As I was on a tour of inspection through the store, this morning, I thought I wouldn't slight your department. You are out early; anything wrong?"

"There wasn't until you came up and spoiled my last night's work."

"How's that? I don't understand."

Max bit his lip till it hurt, and then answered:

"Why, by tumbling over and mixing up those wall-papers and friezes, and their addresses, too."

"What! Why—I didn't know—."

"I staid here until eleven o'clock, last night, to fill out orders, large and small, that were to be sent away by mail and express, besides those to be delivered in the city. And I returned early this morning to tie them up and address them, so as to be ready for your customers, Mr. Ducat, as soon as they should come in, without disappointing the parties who are expecting their goods to-day. I won't ask my assistants to work extra hours, and they wouldn't if I did, for they're older than I am. But while this rush is on, we're all three needed during business hours to show



the goods, and I'd rather do the extra work than see it get behind.

"You asked if anything was wrong; you know now what it is. I was so angry that I left you for fear I should say something I'd be sorry for. I've a wretched temper, Mr. Ducat, it's a regular demon, and I'm trying to see which is to be master—that or myself."

"Yes, yes," said Mr. Ducat, looking embarrassed, "I see, I see; you had good reason to be vexed—good reason.

I thought they were odds and ends out of place. Haven't the sweetest temper in the world, myself. But I'll interfere no more. If this is the style of fellow you are, you won't need it. Just the kind I've been looking for the last ten years. They're scarcer than hens' teeth. Now I'll go. Sorry I made such a muss—sorry—sorry."

By this time Max was laughing, so we may safely conclude he came off victor at last.

MARIA BARRETT BUTLER.

### ALLIGATORS.



The alligator is a strange, unsightly object, living in the swamps and marshes of the warmer parts of America only, for it is not known in other countries, although



it resembles the crocodile, which is found in many tropical climes. The alligator is smaller, lives in swamps and marshes, and often basks in the sun on the sands, while the crocodile's element is the water. The back of the alligator is covered with what might be called a coat of mail, for the thick, bony covering looks like plates of metal with points projecting from it. On the under part of the body, however, is the peculiar skin of which pocket-books, slippers and many useful articles are made.

There is also an oil extracted from them, which burns well in lamps, and the flesh has been used by Indians for food.

Although they are classed with the family of crocodiles, they differ from them in the formation of their heads, which are smaller and flatter. They live chiefly on fish, but also eat animal food, and at times are fierce, for they have been known to chase and attack men while swimming and bathing.

The alligator lays her eggs, twenty and often over that number, in the mud, and leaves them for the heat of the sun to

hatch, but keeps constant watch over them to protect them from harm and keep them from being destroyed. The creatures vary in size from three to sixteen or eighteen feet in length, and the tails are nearly, if not, as long as the bodies. There is great strength in the tails, and it is with them and the partly webbed feet that they propel themselves through the water, and with the tail they easily overturn a canoe or small boat.

Many are found in Florida and other parts of the South, and as they lie on the bank of a river, hidden partly by the thick moss and foliage, they look like a log or trunk of a fallen tree, so motionless are they at times.

In the colder weather they are torpid, and appear so lifeless that it seems as if they must be dead, yet when warmed by the sun they very soon regain their animation. They are very curious creatures, and their general aspect not by any means prepossessing, but on examination there is beauty in the peculiarly marked skin and the armor which they wear.

M. E. B.

## GOLDEN ROD AND ASTER.

A FAIRY TALE.

A long, long while ago there lived upon the top of a great hill a very old woman, bent and crooked and crabbed by the weight of the many years that lay upon her. Up there, one would have thought that she would have kept herself glad-some and happy in spite of the years or the old age creeping on, for the birds were so merry, and the sun shone so brightly, and everything rejoiced in the brightness and beauty about them, all, except the old woman, who borrowed her looks from nothing there, unless it was the gray sky when the rain fell. Perhaps it was living alone so much that brought it about, for she had only herself to think of, and thinking of one's self will bring neither smiles to the face or gladness to the heart. At any rate, she grew more and more morose each year, and the sky was not blue for her, and the sun shone only to scorch her garden's good, while the birds' merry songs were lost upon her, growing more deaf each year.

The house grew older, like its mistress, as the years went on, and promised to

fall down before many more seasons should come and go. But in a certain spot where the moss was green and the shade cool and sweet, a delightful spring burst forth, and went gurgling and dripping and tumbling down the stony side of the hill until meeting another farther down they two made a pretty brook, noisy in its glee, where the birds came to dip, and coo, and comb their feathers, against the time of warbling morn and eve. The brook danced far down into the valley, and children played about its brink but rarely ventured up the hillside whence it started, for a certain fame of the old woman had gone abroad through the valley.

It was a question whether it was a good thing to grow famous in such a way as this, for the old woman's power, it was said, lay in being able to change beasts into creeping things, and birds into beasts, and children into whatsoever she willed. No wonder, then, that children avoided her and her home, and even the red-cheeked Apples upon her ancient



trees offered no temptation, for the very eating of them might turn any boy's stomach into so much leather, or into no stomach at all, just what she pleased.

One day there was seen following the course of the brook, two bright-faced little children, hand in hand, stepping from stone to stone, or stopping gleefully to set their green treasures afloat upon its waters, their tongues joyously busy, or their voices gay with song and laughter. Every now and then they stopped to rest in the shade, and gather a new store of moss and leaves, and dropping nuts, whose cups offered miniature vessels from which to drink, if it were but a drop, of the clear, cold water gurgling by.

How they laughed as a gray squirrel peeped at them from a hole in the hollow trunk of the Oak tree bending above the stream, and when he popped his head in, from sheer affright, they held their breath in fair hope of his gaining a newer confidence in their good intentions.

A rabbit ran across their path, and, pausing erect upon its haunches, moved its long ears to and fro the while they waited longingly for its near approach. And so the time beguiled, they came upon the hill and the smaller course of the brook tumbling down to meet them.

Sitting down within the shadow of the hill they rested, and began to eat the cakes the elder set upon her knee. Her golden hair fell soft and thick about her neck, and the sunshine and shadow playing upon it made beautiful shades of shifting color come and go, while her bright little face fairly shone with good humor and the greatness of the undertaking. Her companion was smaller, with a more delicate outline of feature and large, soft eyes, that were beautiful in their very depth, and gave promise of the faith and love which bid her follow where the other led.

They spread the few bright leaves they had gathered upon the sod, and the younger weaving them skilfully into a tiny wreath, crowned the golden head of the elder, while their merry laughter awoke the echoes among the hills.

There was a curious haze upon the air, and when the wind stirred the boughs overhead, the acorns dropped about their feet, while a saucy quail called "Bob White," so close at hand that they started only to find his speckled wing

and brown head disappearing among the underbrush. In the fields, beyond the yellow Corn hung where the leaves rustled with every breath, and the crows flew, cawing overhead, while away up above the hill the apples hung, russet and yellow and red, or fell in mellow heaps upon the sod.

"We are almost there," the elder said, hopefully, "only the hill to climb now."

"But are you not afraid?" half doubtfully questioned the younger, whose eyes looked about them, not doubting but that the old woman was hidden somewhere close at hand, and might pounce upon them at any moment.

"Afraid? oh, no; I will be so glad to ask her how we may do the good we wish, or become a joy to some one or every one, if we only may. They tell me she is very powerful and wise to make people as they wish to be, that is, if it so pleases her."

"But suppose she is cross and old, and may be wicked, too, if we only knew;" still doubtfully, "let us go back, Golden Hair; do let us go back."

"Oh, no," again answered the cheery voice of the elder, "not now, when we are so near, and we have only to climb a little farther to see and know."

They took hands at this, and went on their way singing a song that was of the good they would do if they could, and the meaning was so powerfully wrought into their singing that a new courage came to them, and before they knew they were laughing again at everything, even the fears that had made poor little Soft Eyes trembling and afraid.

Now, the old woman was spinning, that afternoon, in front of her door, and she wasn't in a very good humor, for her last bit of flax was about all, and she did not exactly know where to get any more to keep the wheel moving, for she was an industrious old woman, and never idle if she could help it. So what does she see but the two children coming up the slope in front of her, hand in hand, singing gayly as they came, and only stopping for a moment at the spring to drink and gather each a russet apple from the heaps upon the ground.

She pounced upon them in a moment, and with the wrinkles gathered in a mass between her eyes, making her look very fierce indeed, and her cap somewhat



awry, where a grisled lock of hair came tumbling out of it, she made the song they were singing come suddenly to an end by the way in which she said,

"Goodness, gracious me! who have we here, drinking at my spring and taking Apples that are not their own?"

Golden Hair spoke first.

"Pray, forgive us for the wrong, if we did any; we are looking for the woman upon the hill who can give us what we wish, or change us into what we would like to be."

"Indeed" said the old woman.

"We wish for the good that will make all others happy," said sweet Soft Eyes.

"Indeed," said the old woman again.

"Can you give it us?" from Golden Hair.

"Bless my soul," said the old woman, "but here are two simpletons; to make others happy, indeed; ha, ha!"

"Don't you like to do it yourself, then?" from Soft Eyes. "Oh, Golden Hair, she isn't the one we want, now see."

"Ah, then you can tell us where she lives, please," from Golden Hair, "and here are the Apples, and we are sorry to have vexed you."

"I'll show you, oh, yes; just come in and sit awhile, and you can have the piece of pie that is spoiling upon the shelf."

The children, not liking to disobey her wishes, went, half in fear, within the door and sat down upon the settee there, while she gave them the pie to eat.

That was a long, long time ago, and

those who saw the two pretty children go up the hill could not remember to have seen them come down again, but it was remarkable that from that time on there came to meadow and hillside, to brook and farm, when the haze was in the air and the nuts were dropping from the trees, and the quail called loud and shrill, and the leaves grew bronzing in the sun, while the Apples were changing from green to russet and gold, and fell ripening upon the ground, there came in a new bloom everywhere, tall branches of lovely field flowers that swayed and tossed gayly in the wind or flung out golden glories of color to make every heart glad that saw them, the one so gay and beautiful with its golden color, and the other shyly hiding near, yet filled with such tender beauty that quite won the hearts of all who saw it, even as the other.

Some wondered, others admired, and all loved the new comers, and every heart was made happier for their coming. They came in time to be called, by those who loved them, Golden Rod and Aster, and always where one was found the other would surely be close at hand.

Do the little folks who may read this, wonder, with me, if the two pretty children, Golden Hair and Soft Eyes, were really changed by the old woman's magic wand into, not the weeds she may have maliciously meant them to be, but into the beautiful, laughing Golden Rod and her twin sister, soft-eyed Aster? I, for one, almost believe it. HELEN KERN.

## EDITOR'S MISCELLANY.

### THE ORIGIN OF FLORAL STRUCTURES.

This is the title of a recently issued work by the Rev. George Henslow, M. A., F. L. S., F. G. S., Professor of Botany at Queen's College, London, England. In this work the origin of floral organs is referred to the effects produced by insects and other external agencies. The manner in which floral organs may have originated in their great variety of forms is critically and specifically considered in great detail, and very conclusive facts are stated to support the hypothesis. And this hypothesis is really Darwin's principle of natural selection, which, by Mr. Henslow's observations and correlations, are exemplified in many of its multitudinous forms. Advanced students in botany will find this a very welcome work, in the perusal of which they will receive probable explanations to many questions heretofore unanswered. The book is published by D. Appleton & Co., of New York. Price

\$1.75. It is one of the International Scientific Series.

### WEATHER TABLES.

*Blake's Weather Tables*, published at the west, have obtained considerable celebrity by forecasting the weather. How much credit is due them in this way we do not know, but they are regularly published, and apparently have a large circulation. This year the *Tables* are to be issued in book form at the price of seventy-five cents a copy. The claim is, that farmers with these *Tables* can conduct their operations more satisfactorily. That some general advice could be given that would be conducive to this end there is no doubt; but that the specific character of the weather for days and weeks can be long foretold there is no reason to think. The publication is issued by C. C. Blake, at Topeka, Kansas, and tables are arranged for all parts of the United States.